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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,086

08/11/2006

Eihachiro Kato

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

BADR, HAMID R

ART UNIT

PAPER NUMBER

1781

NOTIFICATION DATE

DELIVERY MODE

09/16/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/581,086	Applicant(s) KATO ET AL.	
	Examiner HAMID R. BADR	Art Unit 1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE, 8/18/2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/18/2010 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 4 recites the limitation "the former being positioned outside and the latter being positioned inside" in claims 2 or 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tewari (2002, Removal of flatulence factors from chickpea by germination and mold fermentation; hereinafter R1).

7. R1, discloses that the digestibility of chickpeas is increased by germinating seeds for 72 h and fermenting the germinated chickpea to produce tempeh from chickpea seeds using pure culture of *Rhizopus oligosporus*. (Abstract)

8. Therefore, any seeds suitable for human consumption and capable of germination (sprouting) would obviously be used to prepare tempeh in light of the teachings of R1. Brown rice, as presently claimed, would have been utilized in the method of R1 to product a mold fermented sprouted brown rice as presently claimed.

9. It is also noted that due to lack of amylases in *Rhizopus oligosporous*, the proliferation and growth of fungal hyphae would have been facilitated by sprouting of the cereals grains which brings about activation of amylolytic enzymes in the seeds.

Malting, using the germinated barley grains, is a well known example in the brewing art.

10. Therefore, it would have been obvious to one of ordinary skill in the art, to sprout (germinate) brown rice and ferment the sprouted product using *Rhizopus oligosporus* as taught by R1. One would do so to improve the nutritional quality of the cereal grains such as rice. Absent any evidence to contrary and based on the teachings of the cited reference, there would be a reasonable expectation of success in making a variety of tempeh out of cereal grains.

11. Claims 2-4, and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hesseltine et al. (US 3,243,301; hereinafter R2) in view of

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Tewari (2002, Removal of flatulence factors from chickpea by germination and mold fermentation; hereinafter R1).

12. R2 discloses the details of preparing cereal grain containing varieties of tempeh. R2 discloses employing the highly lipolytic and proteolytic *Rhizopus oligosporus* in the preparation of tempeh containing cereal grains. (col. 2, lines 10-21).

13. R2 discloses that that pre-cracking of the cereal grain kernels and a fully hydrated state are required if the mold is to grow extensively and quickly enough to avoid the development of adverse flavor, the expedited growth of the mold is being attributed to the accessibility to the nutrients of the grain below the seed coat. (col. 2, lines 31-37)

14. R2 discloses the preparation of varieties of tempeh from substrates consisting of 3:1 (75:25) to 1:3 (25:75) mixtures of soybeans grits and wheat. (col. 5, Example 3). Given that R2 teaches of tempeh varieties containing a mixture of soybeans and cereals, the combination of soybeans and sprouted rice using the ratios of soybeans to sprouted rice, as presently claimed, would have been obvious.

15. While R2, discloses that a fully hydrated cereal grain would be more nutritionally accessible for mold growth, R2 is silent regarding the sprouting (germination) of the cereal grain.

16. R1 discloses that chickpeas are germinated and fermented using tempeh mold; *Rhizopus oligosporus*. The tempeh disclosed by R1 has improved nutritional quality.
(Abstract)

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17. It is noted that R1 is silent regarding sprouted rice, however, it is obvious that any seeds suitable for human food and capable of germinating, including brown rice, would have been germinated and fermented by the tempeh mold using the method of R1.

18. It is also noted that due to lack of amylases in *Rhizopus oligosporous*, the proliferation and growth of fungal hyphae would have been facilitated by sprouting of the cereals grains which brings about activation of amylolytic enzymes in the seeds. It is also noted that germinated seeds (sprouted seeds) are hydrated and since germination causes a natural bursting (cracking) of the seed coat, the mold mycelia will easily penetrate the grain below the seed coat resulting in expedited growth of the mold.

Given that R2 teaches of tempeh varieties containing a mixture of soybeans and cereals, the combination of soybeans and sprouted rice using the ratios of soybeans to sprouted rice, as presently claimed, would have been obvious. The layering of the fermented soybeans and sprouted rice, as presently claimed, is known and practiced in the art.

18. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make tempeh using soybeans and a variety of cereals by modifying the teachings of R2 and replacing the cereals with the germinated cereals as taught by R1. One would do so to improve the nutritional quality of the tempeh product as well as facilitate the fungal proliferation and growth in sprouted cereal grain. Absent any evidence to contrary and based on the combined teachings of the cited references, there would be a reasonable expectation of success in preparing a combination tempeh using sprouted brown rice.

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Response to Arguments

In light of the new ground(s) of rejection in this Office action, Applicants' arguments have been considered, but are deemed moot.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R Badr
Examiner
Art Unit 1781

/Keith D. Hendricks/

Supervisory Patent Examiner, Art Unit 1781